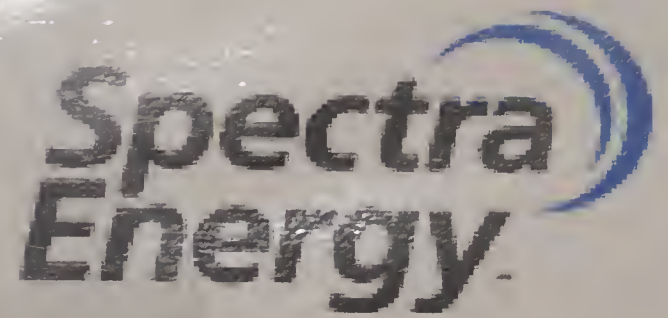




Docket Number CP08-_____

ENVIRONMENTAL REPORT

**Accompanying
FERC 7C Application**

Algonquin Gas Transmission, LLC

J-2 Loop Project

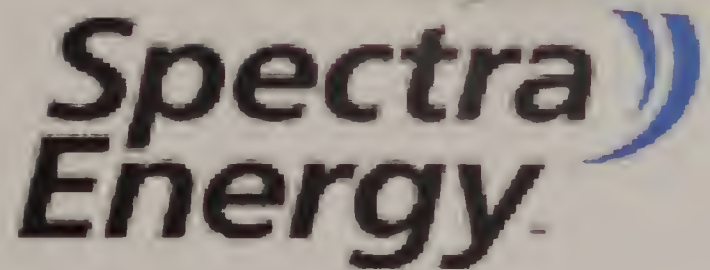
**Medford and Somerville,
Massachusetts**

VOLUME IIB - PUBLIC

Appendices F – H

April 2008

625872096



Docket Number CP08-_____

ENVIRONMENTAL REPORT

**Accompanying
FERC 7C Application**

Algonquin Gas Transmission, LLC

J-2 Loop Project

**Medford and Somerville,
Massachusetts**

VOLUME IIB - PUBLIC

Appendices F – H

REF
7.58.56
AL

April 2008

1875-1876

1877-1878

1879-1880

1881-1882

1883-1884

1885-1886

1887-1888

1889-1890

1891-1892

1893-1894

1895-1896

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RESOURCE REPORT 3	FISH, WILDLIFE AND VEGETATION	3
RESOURCE REPORT 4	CULTURAL RESOURCES	4
RESOURCE REPORT 5	SOCIOECONOMICS	5
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Volume IIB – Public

USGS Full Size Quadrangle Maps	Appendix F
National Wetland Inventory Maps	Appendix G
Alignment Sheets	Appendix H

Volume III – Critical Energy Infrastructure Information – Not for Public Release

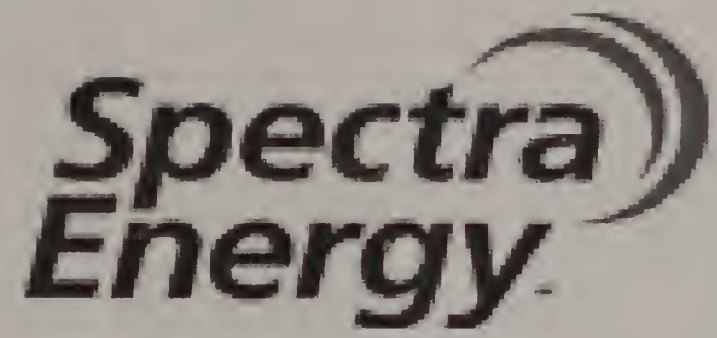
Aboveground Facility Plot Plans	Appendix I
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Volume IV – Privileged / Confidential Information – Not for Public Release

List of Affected Landowners	Appendix J
Cultural Resource Survey Report	Appendix K

1940-1941

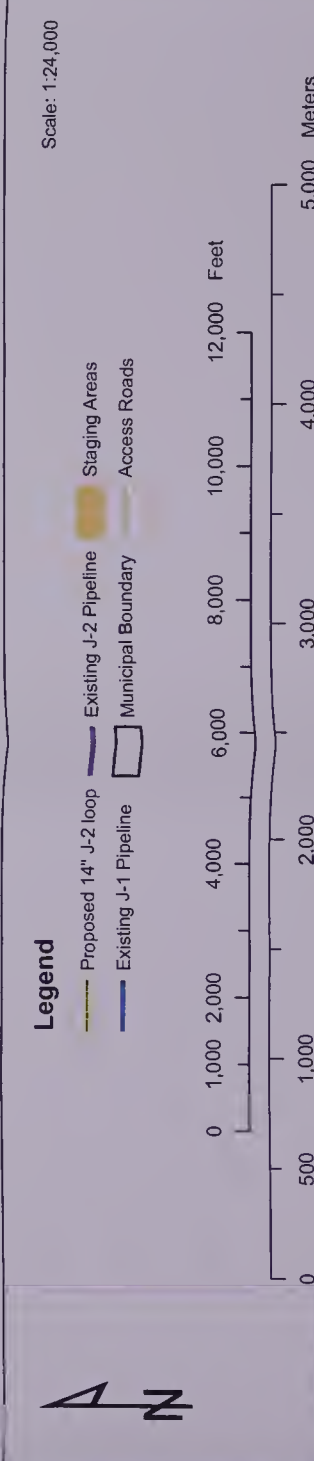
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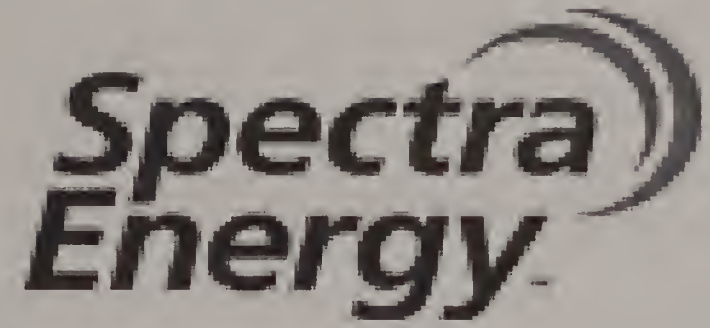
Appendix F – USGS Full Size Quadrangle Map



Full Size Topo Quad
Algonquin Gas Transmission, LLC
J-2 Loop Project
Medford / Somerville, Massachusetts



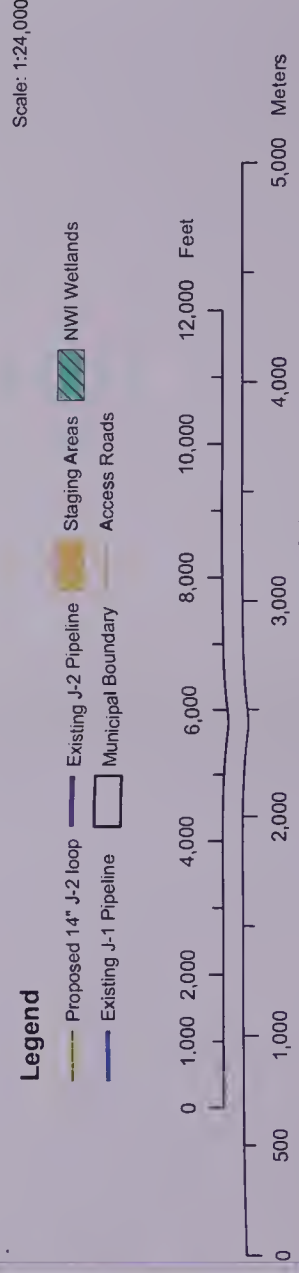
USGS Topographic Map		
April 2008 Map Projection: State Plane MA Mainland NAD 83 Foot US		



Appendix G – National Wetland Inventory Map

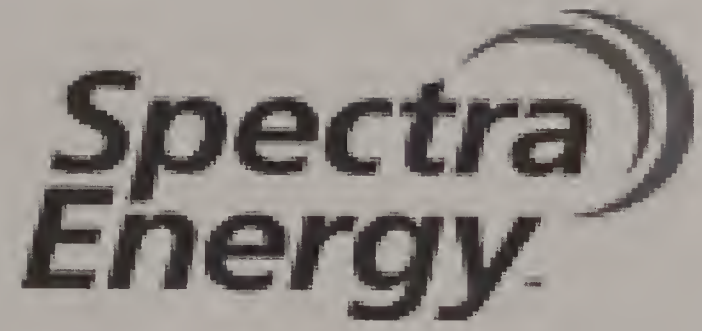


Full Size Topo Quad
Algonquin Gas Transmission, LLC
J-2 Loop Project
Medford / Somerville, Massachusetts



USGS Topographic Map

April 2008
Map Projection: State Plane MA
Mainland NAD 83 Foot US



Appendix H – Alignment Sheets

**MIDDLESEX COUNTY MASSACHUSETTS
CITY OF MEDFORD**

WORKSPACE DETAILS
SCALE: N.T.S.

LEGEND

-  PROPOSED NEW PERMANENT EASEMENT
-  PROPOSED STAGING AREA
-  PROPOSED TEMPORARY ACCESS ROAD (TAR)
-  PROPOSED TEMPORARY WORKSPACE (TWS)
-  PROPOSED ADDITIONAL
TEMPORARY WORKSPACE (AWS)

ALIGNMENT DETAIL

LEGEND

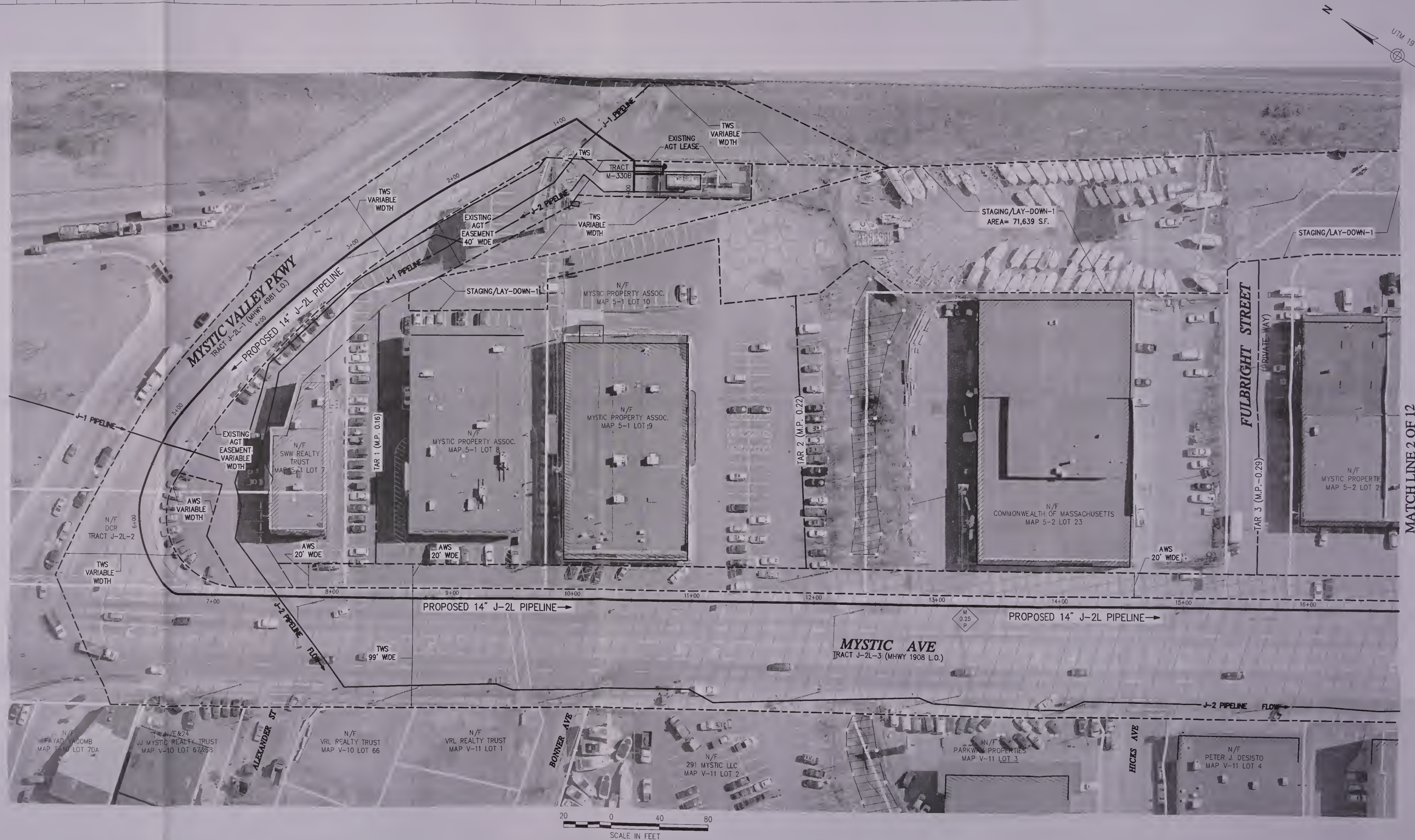
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| | PROPERTY LINE |
| | PROPOSED PIPELINE |
| | EXISTING AGT EASEMENT |
| | TEMP. WORKSPACE |
| | ADDITIONAL TEMP. WORKSPACE |
| | STAGING AREA |
| | TEMP. ACCESS ROAD |
| | EXISTING AGT PIPELINE |
| | EXISTING EASEMENT |
| | STREAM/DITCH |
| | WETLAND BOUNDARY |
| | WETLANDS |
| | PIPELINE MILEPOST |

DATE OF AERIAL PHOTOGRAPHY: 3-29-2007

General Notes

- 1) THE PROPERTY LINES SHOWN ON THIS PLAN WERE COMPILED FROM LOCAL ASSESSOR'S PLATS AND FROM PREVIOUS PLANS AND DEEDS OF RECORD, VHB HAS NOT PERFORMED A FIELD SURVEY TO VERIFY THE PROPERTY LINES.
- 2) THE EXISTING CONDITIONS SHOWN ON THIS PLAN WERE DEVELOPED FROM A COMBINED EFFORT OF AERIAL PHOTOGRAMMETRIC MAPPING BY GOLDEN AERIAL, INC. BASED ON AERIAL PHOTOGRAPHS TAKEN ON MARCH 29, 2007, AND AUGMENTED BY AN ON-THE-GROUND SURVEY PERFORMED BY VHB DURING NOVEMBER 2007.
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- 4) THE WETLANDS SHOWN ON THIS PLAN WERE DELINEATED BY ENSR ENVIRONMENTAL INC. AND FIELD SURVEYED BY VHB IN NOVEMBER 2007.

E & S FIGURES APPLICABLE
TO ALL AREAS



4981	MHWY L.O. 1960 INT. 93	△				VHB Vanasse Hangen Brustlin, Inc. Transportation Land Development Environmental Services 101 Walnut Street, P.O. Box 9151 Wapenham, Massachusetts 02477-9151 617 924 1770 • FAX 617 924 2286	ENGINEERING APPROVALS				J-2 LOOP PROJECT ALIGNMENT SHEET			Spectra Energy Algonquin Gas Transmission, LLC 5400 Westheimer Court, Houston, TX 77056-5310			
5561	MHWY L.O. 1966 ROUTE 93	△					DRAWN BY:	BID		CONSTRUCTION							
—	MHWY L.O. MYSTIC AVE. MEDFORD AND SOMERVILLE	△					SLT		4/08								
5563	MHWY L.O. 1908/1966 INT. 93	△															
5564	MHWY L.O. 1966 INT. 93	△															
5723	MHWY L.O. 1966 INT. 93	△									LOC.	MEDFORD MA					
DWG. NO.	REFERENCE DWG.	REV	DSN	CK	DESCRIPTION		TITLE	SIGNATURE	DATE	SIGNATURE	DATE	YEAR: 2008	W.O. 004110598	SCALE: 1"=40'	DWG. Z-2000	1 OF 12	REV. A

MIDDLESEX COUNTY MASSACHUSETTS
CITY OF MEDFORD

TRACT J-2L-3
COMMONWEALTH OF MASSACHUSETTS
(MHWY)
MYSTIC AVE

STA. 22+38
PI 55°-14' RT.
STA. 23+11
PI 54°-38' LT.

RIGHT-OF-WAY

TRACT NUMBERS
OWNERSHIP/AGENCY

SURVEY DATA

SURVEY COMPANY: VHB WATERTOWN MA
FIELD BOOK:
PAGES:

WORKSPACE DETAILS
SCALE: N.T.S.

LEGEND

- PROPOSED NEW PERMANENT EASEMENT
- PROPOSED STAGING AREA
- PROPOSED TEMPORARY ACCESS ROAD (TAR)
- PROPOSED TEMPORARY WORKSPACE (TWS)
- PROPOSED ADDITIONAL TEMPORARY WORKSPACE (AWS)

ALIGNMENT DETAIL

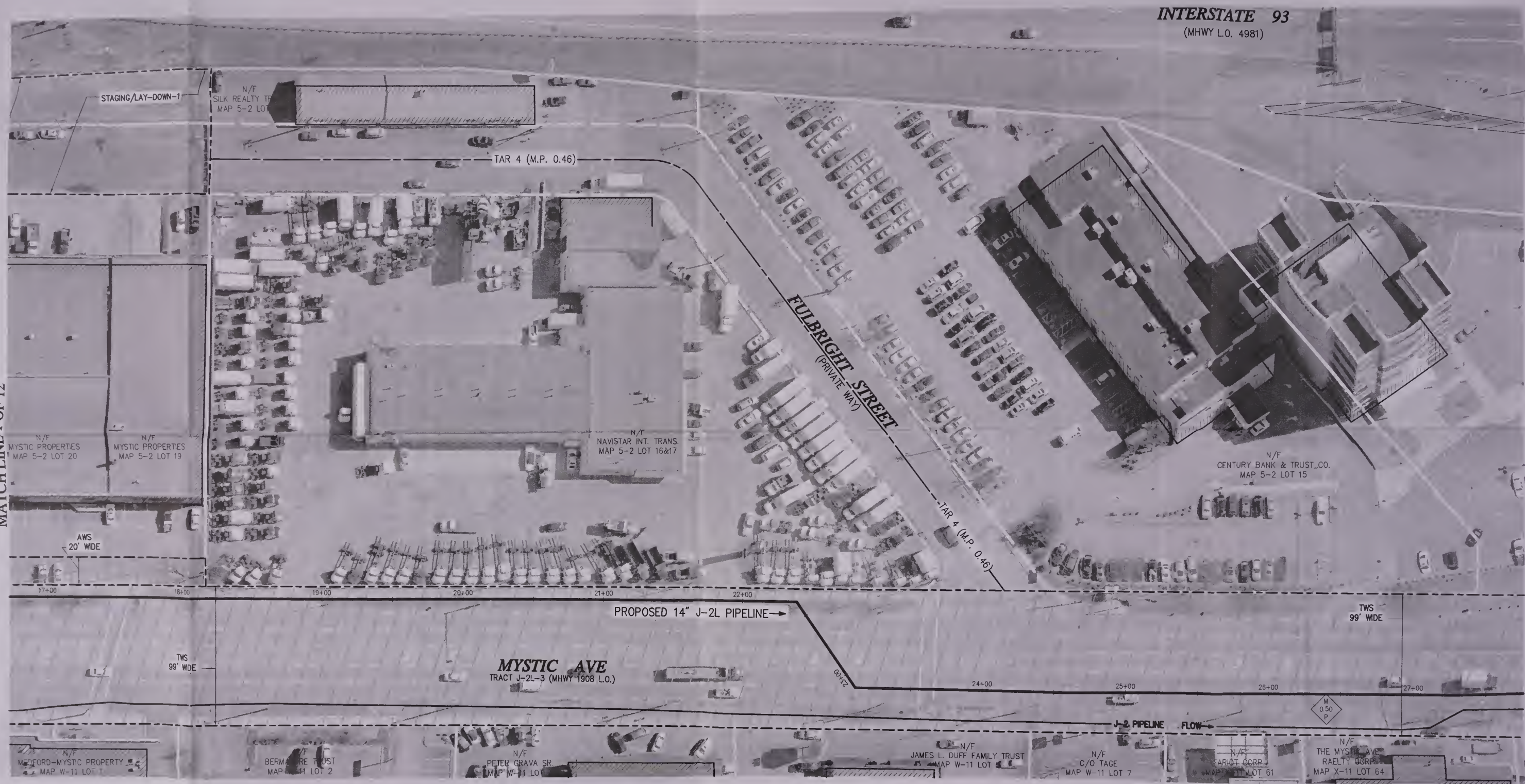
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- PROPERTY LINE
- PROPOSED PIPELINE
- EXISTING AGT EASEMENT
- TEMP. WORKSPACE
- ADDITIONAL TEMP. WORKSPACE
- STAGING AREA
- TEMP. ACCESS ROAD
- EXISTING AGT PIPELINE
- EXISTING EASEMENT
- STREAM/DITCH
- WETLAND BOUNDARY
- WETLANDS
- PIPELINE MILEPOST

DATE OF AERIAL PHOTOGRAPHY: 3-29-2007

MATCH LINE 1 OF 12

MATCH LINE 3 OF 12



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SCALE IN FEET

General Notes

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E & S FIGURES APPLICABLE
TO ALL AREAS

4981	MHWY L.O. 1960 INT. 93
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5564	MHWY L.O. 1908/1966 INT 93
5723	MHWY L.O. 1966 INT. 93
DWG. NO.	REFERENCE DWG.

REV	DSN	CK	DESCRIPTION
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VHB
Vanasse Hangen Brustlin, Inc.

Transportation
Land Development
Environmental Services
101 Walnut Street, P.O. Box 9151
Watertown, Massachusetts 02451-9151
617-924-1770 • FAX: 617-924-2286

ENGINEERING APPROVALS				
DRAWN BY:	BID		CONSTRUCTION	
SLT		4/08		
TITLE	SIGNATURE	DATE	SIGNATURE	DATE

J-2 LOOP PROJECT
ALIGNMENT SHEET

LOC. MEDFORD MA

YEAR: 2008 W.O. 004110598 SCALE: 1"=40'

Spectra Energy

Algonquin Gas Transmission, LLC
5400 Westheimer Court, Houston, TX 77056-5310

DWG. Z-2000 2 OF 12 REV. 4

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**MIDDLESEX COUNTY MASSACHUSETTS
CITY OF MEDFORD / CITY OF SOMERVILLE**

WORKSPACE DETAILS
SCALE: N.T.S.

LEGEND

-  PROPOSED NEW PERMANENT EASEMENT
 PROPOSED STAGING AREA
 PROPOSED TEMPORARY ACCESS ROAD (TAR)
 PROPOSED TEMPORARY WORKSPACE (TWS)
 PROPOSED ADDITIONAL
TEMPORARY WORKSPACE (AWS)

ALIGNMENT DETAIL

LEGEND

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| | PROPERTY LINE |
| | PROPOSED PIPELINE |
| | EXISTING AGT EASEMENT |
| | TEMP. WORKSPACE |
| | ADDITIONAL TEMP. WORKSPACE |
| | STAGING AREA |
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| | EXISTING AGT PIPELINE |
| | EXISTING EASEMENT |
| | STREAM/DITCH |
| | WETLAND BOUNDARY |
| | WETLANDS |
| | PIPELINE MILEPOST |

DATE OF AERIAL PHOTOGRAPHY: 3-29-2007



20 0 40 80
SCALE IN FEET

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E & S FIGURES APPLICABLE
TO ALL AREAS

4981	MHWY L.O. 1960 INT. 93	▲				VHB Vanasse Hangen Brustlin, Inc. Transportation Land Development Environmental Services 101 Walnut Street, P.O. Box 9151 Waltham, Massachusetts 02471-9151 617-924-1770 • FAX 617-924-2286	ENGINEERING APPROVALS				J-2 LOOP PROJECT ALIGNMENT SHEET			 Algonquin Gas Transmission, LLC 5400 Westheimer Court, Houston, TX 77056-5310		
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MIDDLESEX COUNTY MASSACHUSETTS
CITY OF SOMERVILLE

RIGHT-OF-WAY

TRACT NUMBERS
OWNERSHIP/AGENCY

SURVEY DATA

SURVEY COMPANY: VHB WATERTOWN MA
FIELD BOOK:
PAGES:

WORKSPACE DETAILS
SCALE: N.T.S.

LEGEND

PROPOSED NEW PERMANENT EASEMENT

PROPOSED STAGING AREA

PROPOSED TEMPORARY ACCESS ROAD (TAR)

PROPOSED TEMPORARY WORKSPACE (TWS)

PROPOSED ADDITIONAL TEMPORARY WORKSPACE (AWS)

ALIGNMENT DETAIL

LEGEND

PROPERTY LINE

PROPOSED PIPELINE

EXISTING AGT EASEMENT

TEMP. WORKSPACE

ADDITIONAL TEMP. WORKSPACE

STAGING AREA

TEMP. ACCESS ROAD

EXISTING AGT PIPELINE

EXISTING EASEMENT

STREAM/DITCH

WETLAND BOUNDARY

WETLANDS

PIPELINE MILEPOST

DATE OF AERIAL PHOTOGRAPHY: 3-29-2007

General Notes

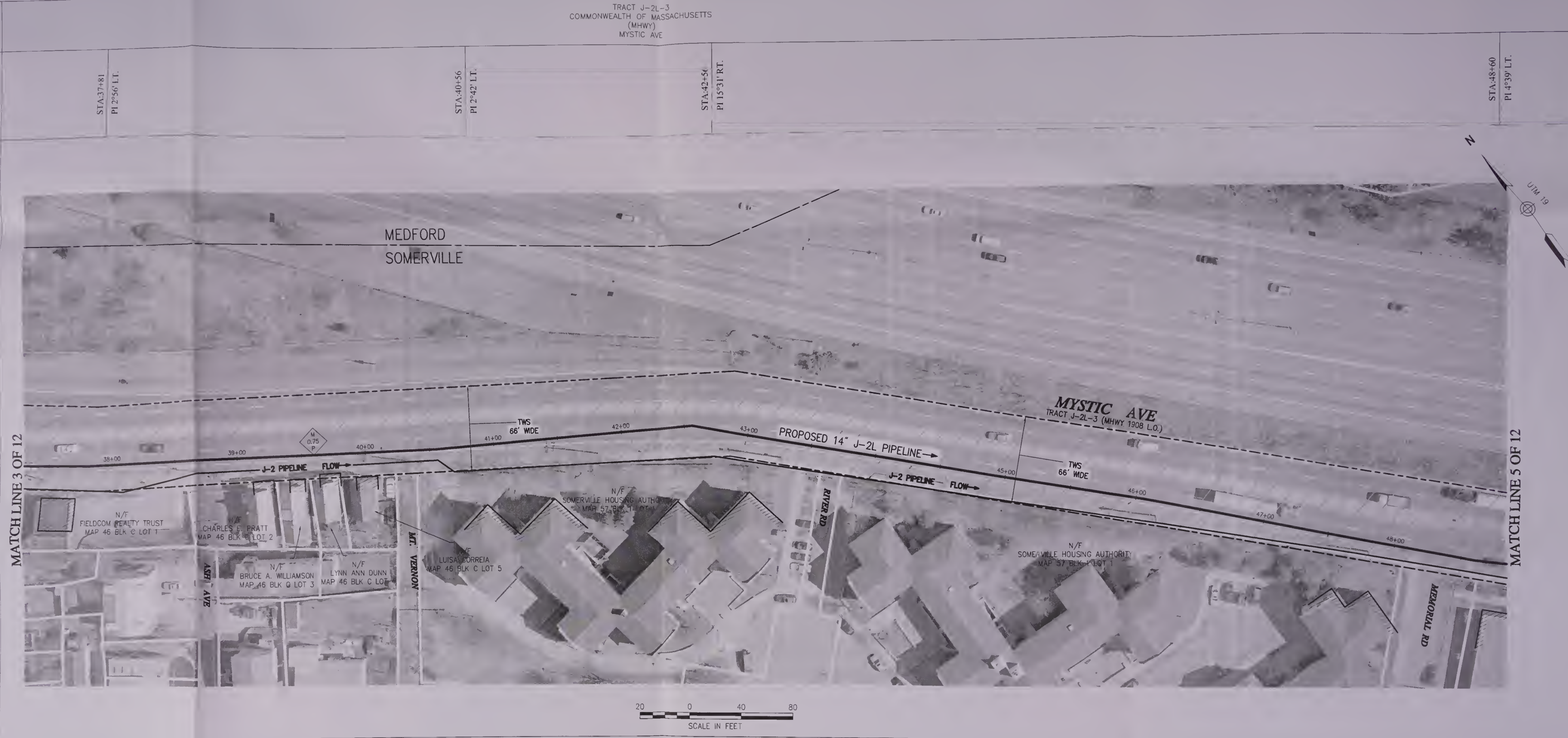
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E & S FIGURES APPLICABLE TO ALL AREAS



DWG. NO.	REFERENCE DWG.	REV	DSN	CK	DESCRIPTION
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5564	MHWY L.O. 1966 INT. 93	△			
5723	MHWY L.O. 1966 INT. 93	△			

ENGINEERING APPROVALS	J-2 LOOP PROJECT		Spectra Energy	
DRAWN BY:	BID	CONSTRUCTION	ALIGNMENT SHEET	
SLT	4/08		LOC. SOMERVILLE MA	
TITLE	SIGNATURE	DATE	YEAR: 2008	W.O. 004110598
			SCALE: 1"=40'	DWG. Z-2000 4 OF 12
				REV. A

VHB

Vanasse Hangen Brustlin, Inc.

Transportation
Land Development
Environmental Services

101 Walnut Street, P.O. Box 9151
Watertown, Massachusetts 02471-9151
617.924.1770 • FAX 617.924.2286

Algonquin Gas Transmission, LLC
5400 Westheimer Court, Houston, TX 77056-5310

**MIDDLESEX COUNTY MASSACHUSETTS
CITY OF SOMERVILLE**

TRACT J-2L-3
COMMONWEALTH OF MASSACHUSETTS
(MHWY)
MYSTIC AVE

RIGHT-OF-WAY

TRACT NUMBERS
OWNERSHIP/AGENCY

SURVEY DATA

SURVEY COMPANY: VHB WATERTOWN MA
FIELD BOOK.
PAGES:

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PI 4°39' LT.

STA:51+28
PI 8°10' RT.

STA:56+77
PI 2°37' RT.

STA:58+34
PI 24°53' RT.

WORKSPACE DETAILS
SCALE: N.T.S.

LEGEND

-  PROPOSED NEW PERMANENT EASEMENT
 PROPOSED STAGING AREA
 PROPOSED TEMPORARY ACCESS ROAD (TAR)
 PROPOSED TEMPORARY WORKSPACE (TWS)
 PROPOSED ADDITIONAL
TEMPORARY WORKSPACE (AWS)

ALIGNMENT DETAIL

LEGEND

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- PROPERTY LINE
 PROPOSED PIPELINE
 EXISTING AGT EASEMENT
 TEMP. WORKSPACE
 ADDITIONAL TEMP WORKSPACE
 STAGING AREA
 TEMP. ACCESS ROAD
 EXISTING AGT PIPELINE
 EXISTING EASEMENT
 STREAM/DITCH
 WETLAND BOUNDARY
 WETLANDS

PIPELINE MILEPOST

DATE OF AERIAL PHOTOGRAPHY: 3-29-2007

MATCH LINE 4 OF 12

MATCH LINE 6 OF 12

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SCALE IN FEET

General Notes

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5723	MHWY L.O. 1966 INT. 93

[illegible]

DESCRIPTION



Vanasse Hangen Brustlin, Inc.
Transportation
Land Development
Environmental Services
101 Walnut Street, P.O. Box 9151
Watertown, Massachusetts 02471-9151
617 924 1770 • FAX 617 924 2286

ENGINEERING APPROVALS

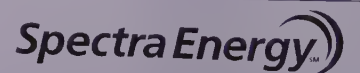
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DRAWN BY:		BID		CONSTRUCTION	
SLT			4/08		
TITLE		SIGNATURE	DATE	SIGNATURE	DATE

J-2 LOOP PROJECT

ALIGNMENT SHEET

LOC.	SOMERVILLE MA
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YEAR: 2008	W.O. 004110598	SCALE: 1"=40'
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Algonquin Gas Transmission, LLC
5400 Westheimer Court, Houston, TX 77056-5310

DWG. Z-2000	5 OF 12	REV. A
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MIDDLESEX COUNTY MASSACHUSETTS
CITY OF SOMERVILLE

RIGHT-OF-WAY

TRACT NUMBERS
OWNERSHIP/AGENCY

SURVEY DATA

SURVEY COMPANY: VHB WATERTOWN MA
FIELD BOOK:
PAGES:

WORKSPACE DETAILS
SCALE: N.T.S.

LEGEND

- PROPOSED NEW PERMANENT EASEMENT
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ALIGNMENT DETAIL

LEGEND

- PROPERTY LINE
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- EXISTING AGT EASEMENT
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- TEMP. ACCESS ROAD
- EXISTING AGT PIPELINE
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- WETLAND BOUNDARY
- WETLANDS

PIPELINE MILEPOST

DATE OF AERIAL PHOTOGRAPHY: 3-29-2007

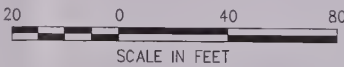
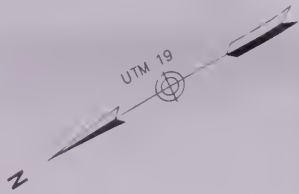
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E & S FIGURES APPLICABLE
TO ALL AREAS

TRACT J-2L-4
CITY OF SOMERVILLE
TEMPLE STREET

STA 68+21
PI 2°-23' RT.



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5561	MHWY L.O. 1966 ROUTE 93
	MHWY L.O. MYSTIC AVE. MEDFORD AND SOMERVILLE
5563	MHWY L.O. 1908/1966 INT 93
5564	MHWY L.O. 1966 INT. 93
5723	MHWY L.O. 1966 INT. 93
DWG. NO.	REFERENCE DWG.

REV	DSN	CK	DESCRIPTION
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VHB
Yonasse Hansen Brustlin, Inc.
Transportation
Land Development
Environmental Services
101 Walnut Street, P.O. Box 9151
Watertown, Massachusetts 02471-9151
617-924-1770 • FAX 617-924-2266

ENGINEERING APPROVALS				
DRAWN BY:		BID		CONSTRUCTION
SLT		4/08		
TITLE	SIGNATURE	DATE	SIGNATURE	DATE

J-2 LOOP PROJECT ALIGNMENT SHEET		
LOC.	SOMERVILLE MA	
YEAR: 2008	W.O. 004110598	SCALE: 1"=40'

Spectra Energy
Algonquin Gas Transmission, LLC
5400 Westheimer Court, Houston, TX 77056-5310

**MIDDLESEX COUNTY MASSACHUSETTS
CITY OF SOMERVILLE**

WORKSPACE DETAILS
SCALE: N.T.S.

LEGEND

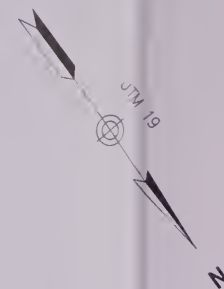
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ALIGNMENT DETAIL

LEGEND

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 PROPOSED PIPELINE
 EXISTING AGT EASEMENT
 TEMP. WORKSPACE
 ADDITIONAL TEMP. WORKSPACE
 STAGING AREA
 TEMP. ACCESS ROAD
 EXISTING AGT PIPELINE
 EXISTING EASEMENT
 STREAM/DITCH
 WETLAND BOUNDARY
 WETLANDS
 PIPELINE MILEPOST

DATE OF AERIAL PHOTOGRAPHY: 3-29-2007



General Notes

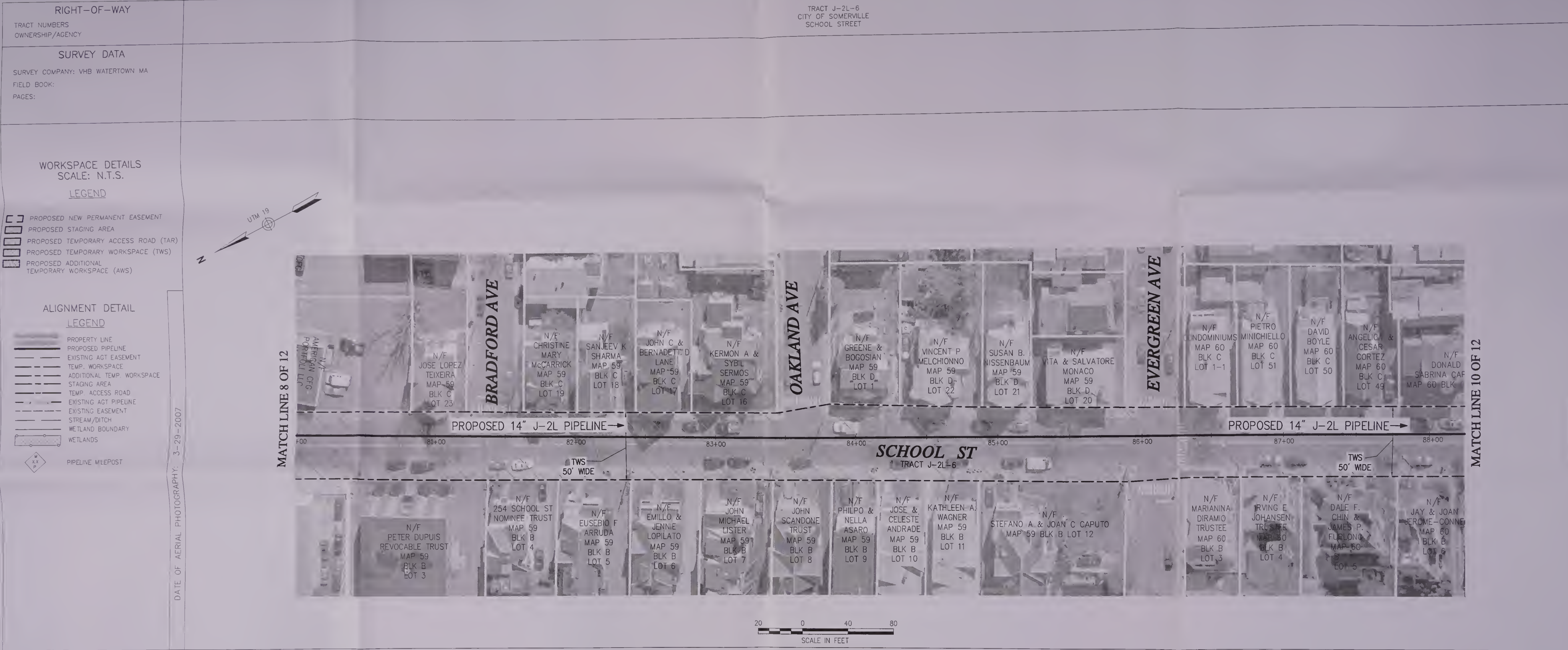
- 1) THE PROPERTY LINES SHOWN ON THIS PLAN WERE COMPILED FROM LOCAL ASSESSOR'S PLATS AND FROM PREVIOUS PLANS AND DEEDS OF RECORD. VHB HAS NOT PERFORMED A FIELD SURVEY TO VERIFY THE PROPERTY LINES
- 2) THE EXISTING CONDITIONS SHOWN ON THIS PLAN WERE DEVELOPED FROM A COMBINED EFFORT OF AERIAL PHOTOGRAMMETRIC MAPPING BY GOLDEN AERIAL, INC., BASED ON AERIAL PHOTOGRAPHS TAKEN ON MARCH 29, 2007, AND AUGMENTED BY AN ON-THE-GROUND SURVEY PERFORMED BY VHB DURING NOVEMBER 2007.
- 3) HORIZONTAL DATUM IS BASED ON UTM 19 PROJECTIONS, NAD 1983.
- 4) THE WETLANDS SHOWN ON THIS PLAN WERE DELINEATED BY ENSR ENVIRONMENTAL INC. AND FIELD SURVEYED BY VHB IN NOVEMBER 2007.

E & S FIGURES APPLICABLE
TO ALL AREAS

[illegible]

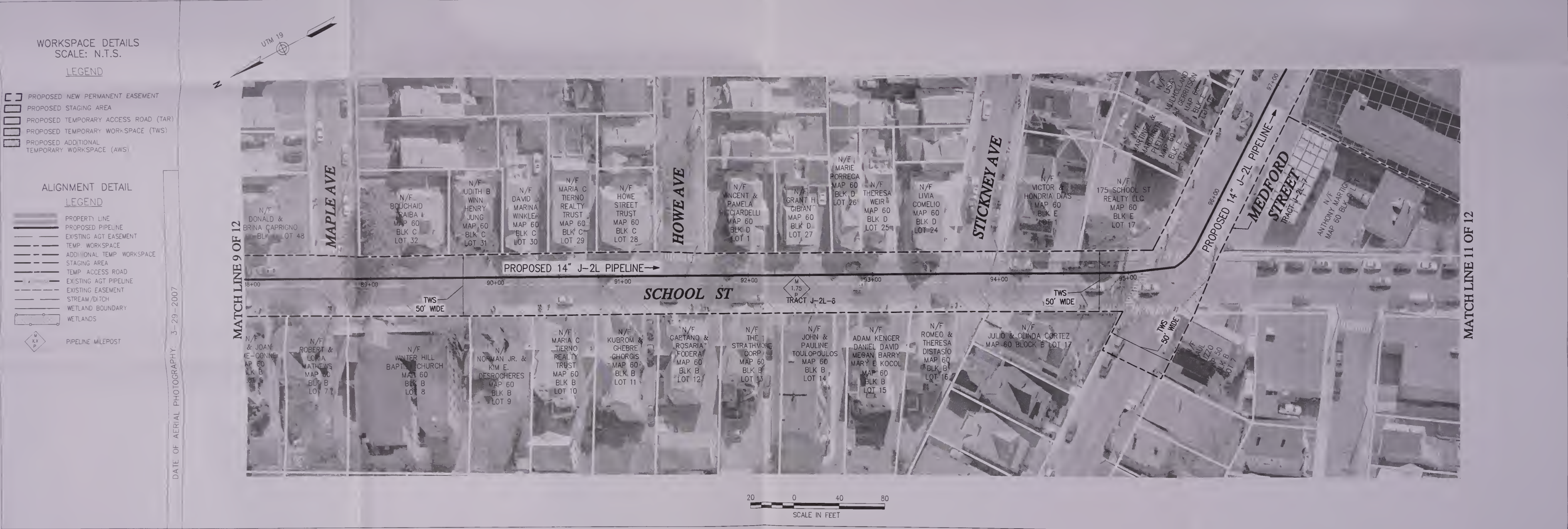
\\Mawold\ld\08000...ag\src\place-08.00.52 AGT FLRC - 08.dwg

MIDDLESEX COUNTY MASSACHUSETTS
CITY OF SOMERVILLE



MIDDLESEX COUNTY MASSACHUSETTS
CITY OF SOMERVILLE

RIGHT-OF-WAY TRACT NUMBERS OWNERSHIP/AGENCY	TRACT J-2L-6 CITY OF SOMERVILLE SCHOOL STREET	TRACT J-2L-7 CITY OF SOMERVILLE MEDFORD STREET
SURVEY DATA SURVEY COMPANY: VHB WATERTOWN MA FIELD BOOK: PAGES:	STA:94+97 PI 6°-05' LT.	STA:95+11 RIGHT OF WAY STA:95+35 PI 40°-35' LT. STA:95+50 PI 16°-13' LT.



General Notes	1) THE PROPERTY LINES SHOWN ON THIS PLAN WERE COMPILED FROM LOCAL ASSESSOR'S PLATS AND FROM PREVIOUS PLANS AND DEEDS OF RECORD. VHB HAS NOT PERFORMED A FIELD SURVEY TO VERIFY THE PROPERTY LINES.			
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E & S FIGURES APPLICABLE TO ALL AREAS				

4981	MHWY L.O. 1960 INT. 93	△			
5561	MHWY L.O. 1966 ROUTE 93	△			
-	MHWY L.O. MYSTIC AVE, MEDFORD AND SOMERVILLE	△			
5563	MHWY L.O. 1908/1966 INT. 93	△			
5564	MHWY L.O. 1966 INT. 93	△			
5723	MHWY L.O. 1966 INT. 93	△			
DWG. NO.	REFERENCE DWG.	REV	DSN	CK	DESCRIPTION

VHB
Vinnase-Hansen Brustlin, Inc.
Transportation
Land Development
Environmental Services
101 Walnut Street, P.O. Box 9151
Watertown, Massachusetts 02471-9151
617.924.1779 • FAX 617.924.2260

ENGINEERING APPROVALS					
DRAWN BY:	BID		CONSTRUCTION		
SLT	4/08				
TITLE	SIGNATURE	DATE	SIGNATURE	DATE	

J-2 LOOP PROJECT ALIGNMENT SHEET			Spectra Energy		
LOC. SOMERVILLE MA			Algonquin Gas Transmission, LLC 5400 Westheimer Court, Houston, TX 77056-5310		
YEAR: 2008	W.O. 004110598	SCALE: 1"=40'	DWG. Z-2000	10 OF 12	REV. A

**MIDDLESEX COUNTY MASSACHUSETTS
CITY OF SOMERVILLE**

WORKSPACE DETAILS
SCALE: N.T.S.

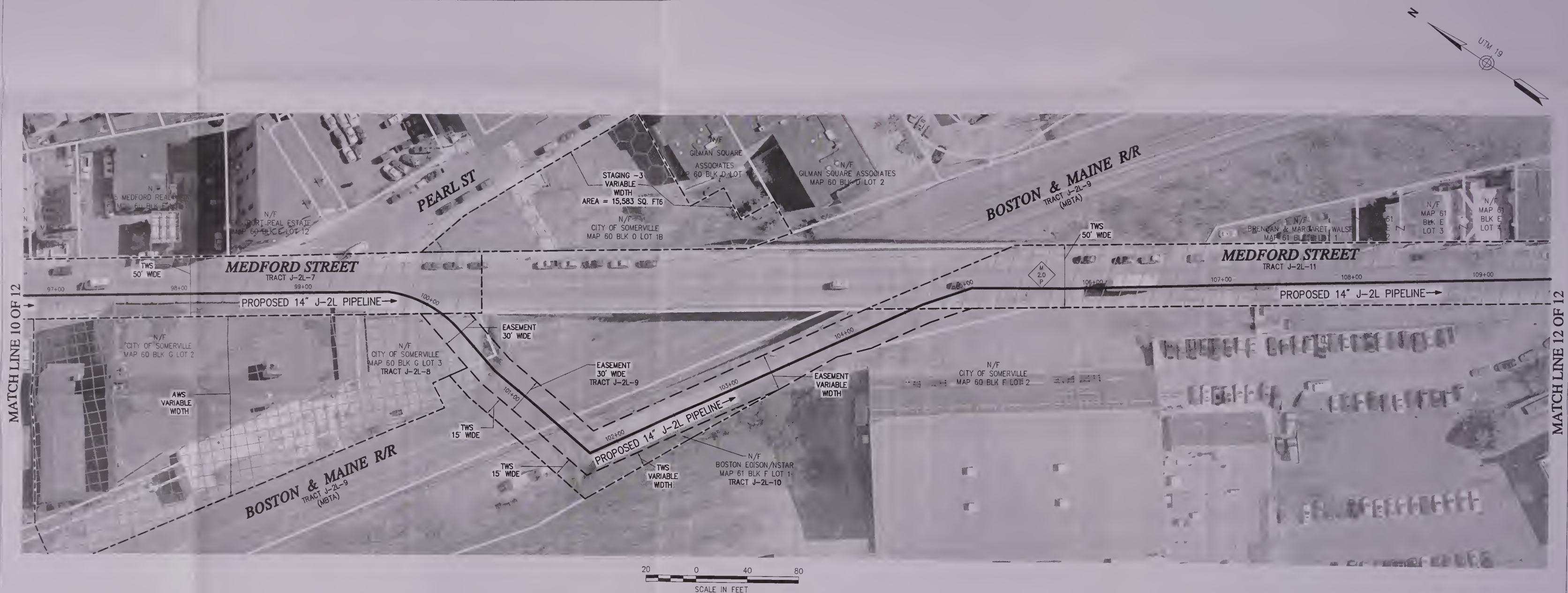
LEGEND

- ☐ PROPOSED NEW PERMANENT EASEMENT
- ☐ PROPOSED STAGING AREA
- ☐ PROPOSED TEMPORARY ACCESS ROAD (TAR)
- ☐ PROPOSED TEMPORARY WORKSPACE (TWS)
- ☐ PROPOSED ADDITIONAL TEMPORARY WORKSPACE (AWS)

ALIGNMENT DETAIL

LEGEND

-
- PROPERTY LINE
PROPOSED PIPELINE
EXISTING AGT EASEMENT
TEMP. WORKSPACE
ADDITIONAL TEMP. WORKSPACE
STAGING AREA
TEMP. ACCESS ROAD
EXISTING AGT PIPELINE
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STREAM/DITCH
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E & S FIGURES APPLICABLE
TO ALL AREAS

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5561	MHWY L.O. 1966 ROUTE 93	△					DRAWN BY:	BID		CONSTRUCTION									
—	MHWY L.O. MYSTIC AVE. MEDFORD AND SOMERVILLE	△					SLT		4/08										
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DWG. NO.	REFERENCE DWG.	REV	DSN	CK	DESCRIPTION		TITLE	SIGNATURE	DATE	SIGNATURE	DATE	LOC.	SOMERVILLE MA	YEAR: 2008	W.O. 004110598	SCALE: 1"=40'	DWG. Z-2000	11 OF 12	REV. A

**MIDDLESEX COUNTY MASSACHUSETTS
CITY OF SOMERVILLE**

WORKSPACE DETAILS
SCALE: N.T.S.

LEGEND

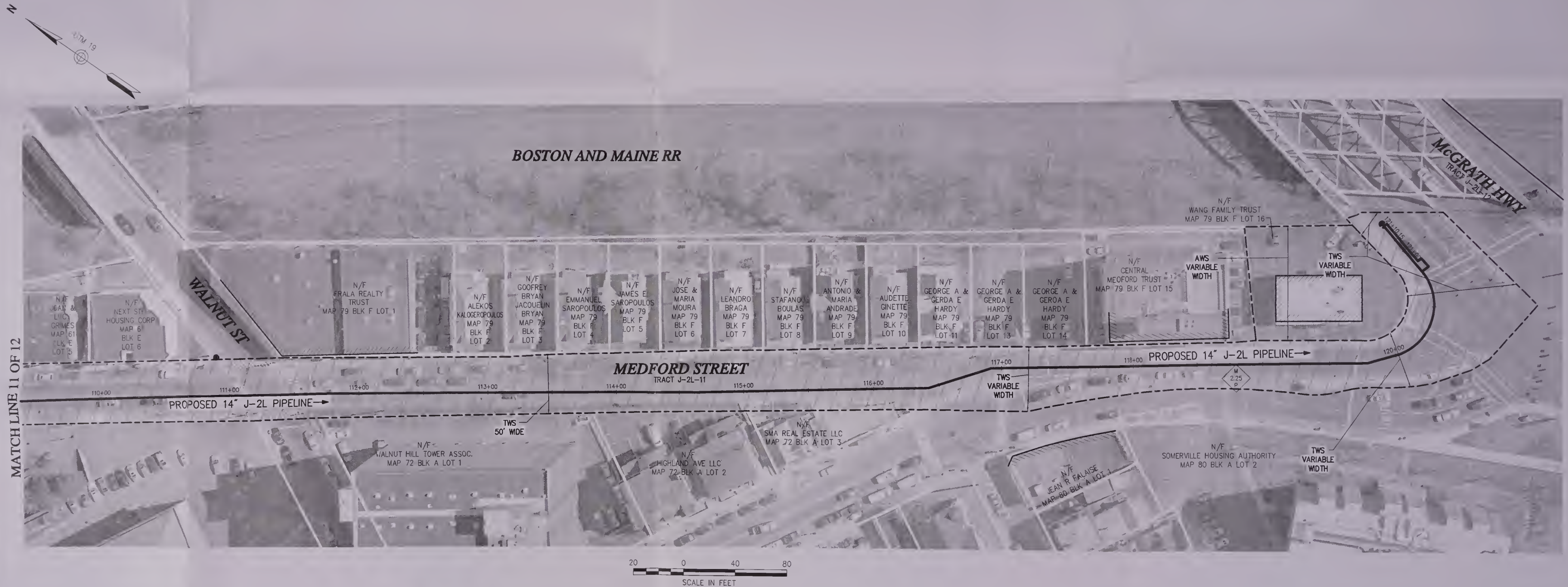
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 TEMPORARY WORKSPACE (AWS)

ALIGNMENT DETAIL

LEGEND

-
- PROPERTY LINE
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 EXISTING AGT EASEMENT
 TEMP WORKSPACE
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 STAGING AREA
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